

CLAIMS

1. A driving apparatus for driving an assisting mechanism serving as an assistant for opening operation or closing operation of a door, the driving apparatus comprising:

5 a plurality of driving sources;
a plurality of driving gears that is individually provided at the driving sources; and

a driven gear that is engaged with each of the driving gears,
wherein

10 the assisting mechanism is activated through rotation of the driven gear by driving of the driving sources.

2. The driving apparatus according to claim 1, wherein
the driving gears are worms, and

15 the driven gear is a worm wheel.

3. A door closer comprising:

a striker that is provided on one of a body and a door of a vehicle in such a manner that the striker is engageable with a latch
20 provided on other of the body and the door of the vehicle;

an assisting mechanism that pulls in the striker in a state of engagement with the latch to close the door; and

a driving apparatus that drives the assisting mechanism,
wherein

25 the driving apparatus includes

a plurality of driving sources;
a plurality of driving gears that is individually provided at
the driving sources; and

a driven gear that is engaged with each of the driving
5 gears, and

the assisting mechanism is activated through rotation of the
driven gear by driving of the driving sources.

4. The door closer according to claim 3, wherein
10 the driving gears are worms, and
the driven gear is a worm wheel.

5. The door closer according to claim 3, further comprising a
switching unit that is provided between the driving sources and a power
15 source that supplies a current to the driving sources to switch a current
flow to the driving sources on and off, wherein

when the striker drawn in through the rotation of the driven gear
has reached a predetermined drawing-in termination position, the
switching unit cuts off the current flow to the driving sources to stop
20 driving of the driving sources.

6. The door closer according to claim 5, further comprising a
detector that detects whether the latch and the striker is in engagement
with each other, wherein

25 when a state of the latch and the striker is switched from

disengagement to engagement, based on a result of detection by the detector, the switching unit starts the current flow to the driving sources.